1	CLEMENT SETH ROBERTS (SBN 209203)	
	croberts@orrick.com	
2	BAS DE BLANK (SBN 191487) basdeblank@orrick.com	
3	ALYSSA CARIDIS (SBN 260103)	
	acaridis@orrick.com	
4	ORRICK, HERRINGTON & SUTCLIFFE LLF	
_	The Orrick Building	
5	405 Howard Street San Francisco, CA 94105-2669	
6	Telephone: +1 415 773 5700	
	Facsimile: +1 415 773 5759	
7		
0	SEAN M. SULLIVAN (pro hac vice)	
8	sullivan@ls3ip.com J. DAN SMITH (pro hac vice)	
9	smith@ ls3ip.com	
	MICHAEL P. BOYEA (pro hac vice)	
10	boyea@ ls3ip.com	
11	COLE B. RICHTER (pro hac vice)	
11	richter@ls3ip.com LEE SULLIVAN SHEA & SMITH LLP	
12	656 W Randolph St., Floor 5W	
	Chicago, IL 60661	
13	Telephone: +1 312 754 0002	
14	Facsimile: +1 312 754 0003	
14	Attorneys for Sonos, Inc.	
15	Thio meys for solies, the.	
16	UNITED STATES	S DISTRICT COURT
17	MODTHEDN DISTD	ICT OF CALIFORNIA,
	NORTHERN DISTR	ici of california,
18	SAN FRANCI	ISCO DIVISION
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20	SONOS, INC.,	Case No. 3:20-cv-06754-WHA
.	331,33,11,3,	
21	Plaintiff and Counter-defendant,	Consolidated with
22		Case No. 3:21-cv-07559-WHA
	V.	SONOS, INC.'S MOTION FOR
23	GOOGLE LLC,	INJUNCTIVE RELIEF AND
, ,	,	ADDITIONAL DAMAGES
24	Defendant and Counter-claimant.	T 1 TT XX7'11' A1
25		Judge: Hon. William Alsup Courtroom: 12, 19th Floor
		Trial Date: May 8, 2023
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### I. INTRODUCTION

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The Court should enjoin Google from selling infringing media players. As the Court heard throughout trial, Sonos and Google compete in the wireless multiroom audio market. That competition centers on getting a household to invest in one company's smart home products—and in particular smart speaker products—over another's. Trial Tr. (Kwasizur) 1019:19-1020:6. That is because a customer who buys one audio player will likely buy around 3 more players over their lifetime, id., and different companies' speakers generally do not work together. So once a customer adopts one brand of speaker, there are substantial "lock-in" effects preventing that customer from buying a different brand of speaker in the future. Google capitalizes on this "lockin" effect by pricing its products at a loss—a tactic possible only because Google derives billions of dollars from search, subscription, and ad revenue when people use its products. Google's lossleader tactics pull sales away from Sonos. Google's sale of competing products that use Sonos's patented technology and the resultant loss in households who use Sonos's products causes irreparable and unquantifiable harm to Sonos. Monetary damages are inadequate to compensate Sonos for competing against a rival who has misappropriated Sonos's own technology and used its massive resources to seize market share from Sonos by flooding the market with loss-leading products.

The balance of harms strongly favors Sonos; speakers are Sonos's lifeblood, while Google is an adjudged infringer and the sale of its accused products provides only a miniscule fraction of its overall revenue. The public interest favors an injunction, as is usually the case in patent suits between competitors. Google should therefore be permanently enjoined from infringing the '885 patent.

If the Court does not issue a permanent injunction, however, it should award Sonos ongoing royalties to compensate for Google's post-verdict infringement, which is indisputably willful. And in any event, the Court should include supplemental damages and pre- and post-judgment interest in the Final Judgment.

### II. THE COURT SHOULD PERMANENTLY ENJOIN GOOGLE.

The Constitution authorizes Congress to grant inventors an "exclusive right to their ... discoveries." U.S. Const. art. I, § 8, cl. 8. Accordingly, Congress enacted 35 U.S.C. § 283, which empowers courts to "grant injunctions in accordance with the principles of equity to prevent the violation of any right secured by patent." Given the "difficulties of protecting" the right to exclude "solely with monetary relief," there exists a "long tradition of equity practice' granting 'injunctive relief upon a finding of infringement in the vast majority of patent cases," which should guide courts in determining whether to issue a permanent injunction in a patent case today. *Presidio Components, Inc. v. Am. Tech. Ceramics Corp.*, 702 F.3d 1351, 1362 (Fed. Cir. 2012) (quoting *eBay Inc. v. MercExchange, L.L.C.*, 547 U.S. 388, 395 (2006) (Roberts, C.J., concurring)). Thus, "[a]bsent adverse equitable considerations, the winner of a judgment of validity and infringement may normally expect to regain the exclusivity that was lost with the infringement." *Edwards Lifesciences AG v. CoreValve, Inc.*, 699 F.3d 1305, 1314 (Fed. Cir. 2012) (vacating the denial of an injunction).

To obtain a permanent injunction, Sonos must show: "(1) that it has suffered an irreparable injury; (2) that remedies available at law, such as monetary damages, are inadequate to compensate for that injury; (3) that, considering the balance of hardships between the plaintiff and defendant, a remedy in equity is warranted; and (4) that the public interest would not be disserved by a permanent injunction." *eBay*, 547 U.S. at 391 (majority). All four factors are satisfied here.

### A. Sonos Has Suffered Irreparable Harm.

Irreparable harm often arises where the patentee "practices its invention and is a direct market competitor" with the infringing defendant. *Edwards*, 699 F.3d at 1315. In those circumstances, "the patentee suffers the harm—often irreparable—of being forced to compete against products that incorporate and infringe its own patented inventions." *Douglas Dynamics*, *LLC v. Buyers Prods. Co.*, 717 F.3d 1336, 1345 (Fed. Cir. 2013). Sonos has suffered that irreparable harm in this case.

Sonos practices the '885 patent. Trial Tr. 472:2-5. So does Google—in violation of Sonos's rights, as the jury found. Dkt. 774. And the evidence at trial showed that Sonos and Google compete directly in the speaker market. Sonos's witnesses detailed how Google repeatedly introduced competing products, including the Google Home, which "competed with the Sonos Play 1 and a bit later the Sonos 1," and the Google Home Max, which "competed with the Sonos 5 or Play 5." Tr. 310:4-311:2. Google even used the Sonos Play 5 as a direct comparator with Google's products. Tr. 1534:2-13. This competition started in 2015 and continues today, at least as to media players like the Nest Audio. Tr. 298:25-299:3; Tr. 1010:11-13; Tr. 1117:5-1118:6; Kwasizur Decl. ¶¶ 3-9.

"Google business records" also "talk about the competition with Sonos" and compare Google's products to Sonos's products. Tr. 1116:21-1117:18 (Malackowski); 1603:19-24 (Mr. Bakewell conceding that Google and Sonos "were competitors and they were working together to partner" when the infringement began); TX158 (Conjoint study comparing Google to Sonos, among others). And real-world experience shows this is true: "If you go to, for example, a Best Buy store, you'll see the Google product right next to -- on the shelf to the Sonos product." Tr. 1118:11-13. Google's advertisements for its speakers even use the same language as Sonos's. See Kwasizur Decl. Ex. H at 6 (Sonos and Google ads describing "brilliant sound"). And multiple news articles recognize the direct competition between Sonos and Google, including by comparing the products against each other. Kwasizur Decl. ¶¶ 7, 9.

Moreover, Ms. Kwasizur testified that "los[ing] one customer" is "really more than just one customer," because the average customer who buys one Sonos product goes on to buy about three more products. Trial Tr. 1019:19-1020:6. Customers who buy one type of Sonos product are also more likely to buy another type—for example, purchasing a speaker and then a "home theater" setup. Trial Tr. 1021:12-16. *See also, e.g.*, Dkt. 755-2 at ECF pp. 59-60 (Google Senior Counsel Tim Kowalski testifying that he owns "probably eight" Sonos products for personal use at his house). Google itself recognizes that selling speakers in "bundles" improves sales of the speakers. E.g., TX158 at 21; Tr. 1606:17-25. Google also recognizes that more than half of

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customers are "very likely or extremely likely to purchase a bundle of three smart speakers." Tr. 1607:5-8. These downstream impacts on Sonos's sales are hard to quantify due to the "ecosystem effect'—that is, the effect the sale of a single product can have on downstream sales." Apple Inc. v. Samsung Elecs. Co., 809 F.3d 633, 645 (Fed. Cir. 2015).

In addition, sales of smart speakers have an important lock-in effect, in that a customer typically sticks with one brand of smart speaker for a significant amount of time. Kwasizur Decl. ¶¶ 13-14. Sonos designs its products such that "everything works together" and users can play music on the Sonos system "throughout [their] home." Tr. 1021:2-20. This is because speakers from different brands are difficult to group together, or, in some cases, cannot be grouped together. Kwasizur Decl. ¶ 13. It is extremely difficult to quantify this type of loss from lock-in effects, which compound the problem of the ecosystem effect discussed above.

In sum, the "[h]ead-to-head competition and lost market share" incurred by Sonos "tend[s] to evidence irreparable harm" caused by Google's infringement. TEK Glob. S.R.L. v. Sealant Sys. Int'l, Inc., 920 F.3d 777, 793 (Fed. Cir. 2019) (collecting cases).

There is also ample evidence that "the patented features impact consumers' decisions to purchase the accused devices," establishing a causal nexus between Google's infringement and Sonos's harm. Apple, 809 F.3d at 642. To establish irreparable harm due to Google's infringement, Sonos does not need to show that the infringing features of Google's products "were the exclusive or predominant reason why consumers bought" Google's products; instead, the proper inquiry looks to "whether there is some connection between the patented features and the demand" for Google's products. *Id.* There is much more than "some connection" here.

As an initial matter, Sonos maintains that the claims cover static grouping and the necessary architecture for creating, saving, and later invoking saved groups. See Dkt. 711 at 1 (explaining that "the claims are directed to a novel mechanism for grouping zone players into zone scenes which, among other things, allows for overlapping groups" and identifying that "mechanism" in detail). There is essentially no dispute that static grouping is an important feature of Google's products. Tr. 1234:5-1235:19; 1275:5-21 (MacKay discussing static groups); Tr. 1519:8-18, 1529:12-19 (Chan). Google's own survey evidence showed that the ability to "group speakers to hear music in multiple rooms at the same time" was "actually appealing" to customers. Tr. 1600:13-23; TX158 at 36.

Even if the invention were limited to the idea of static groups that allow speakers to be a member of multiple groups, there is ample evidence that consumers demand the ability to create overlapping groups in their smart speakers.

First, Sonos advertised and promoted its "zone scenes" technology and the flexibility it allowed, including that speakers could be members of multiple groups. Customers were "very happy" when Sonos released the zone-scene technology, while the press praised that feature as "by far the best" part of Sonos's products. Trial Tr. 469:14-470:15.

Google also advertises the ability to create speaker groups. Google promoted the infringing "room grouping feature to its customers." Trial Tr. 1123:1-4; Tr. 1530:7-10. Google also released "blog posts about its multiroom features," Trial Tr. 1530:11-17; TX6353, indicating that Google saw those features as valuable to current and future customers. In fact, Google's own witness explained that both static groups and *overlapping* speaker groups are used by customers. Mr. Chan explained that the "most common use of static speaker groups is to assign all of the devices you own the name 'All my speakers,' so then later you can say, 'Okay, Google, Play music on all my speakers." Tr. 1519:12-18; see also Tr. 1523:6-10 (majority of people using static groups make an "All my speakers" or "Everywhere" group). If the "most common" speaker group covers *all* speakers, then any and every additional speaker group is automatically an overlapping group. For example, if the user makes an "all my speakers" group and also wants a "first floor" group, that would necessarily entail speakers that are members of multiple groups. Put differently, if Google removed the infringing overlapping grouping feature, then Google's users would either (1) be limited to a single, "all my speakers," group or (2) be unable to use the most common configuration of grouping. That is why Mr. Shekel testified that it would "be a poor user experience to limit speakers to just one group" or to "kick speakers out of a prior group if they're added to a new group." Shekel 109:11-110:05; Dkt. 755-2 at 6-7.

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Second, Sonos received widespread praise for zone scenes. Trial Tr. 469:14-470:15 (Rob Lambourne discussing TX6780); *id.* at 1677:6-10, 1677:23-1678:3 (Dr. Almeroth discussing same exhibit); Kolker Decl. Ex. 1 (summarizing praise of Sonos's S2 products and zone scene technology).

Finally, Google's minimalist attempt at a redesign also demonstrates that Google recognizes allowing speakers to be members of multiple speaker groups is important to consumers. Instead of disabling that functionality—a redesign contemplated by Google's technical and damages experts—or adopting other redesign options, Google chose to insert a single line of code that terminates current playback when a speaker is added to a group. In other words, Google preferred to *retain* the ability to add a speaker to multiple static groups when (unsuccessfully) trying to avoid infringement. That is because Google recognizes that the ability to create multiple, static speaker groups is valuable to customers. Shekel 109:11-110:05; Dkt. 755-2 at 6-7. Accordingly, since there is at least "some connection between the patented features and the demand" for Google's products, *Apple*, 809 F.3d at 642, Sonos has established irreparable harm due to Google's infringement.

### B. Monetary Damages Are Inadequate To Compensate For That Injury.

Money damages cannot compensate Sonos for its irreparable harm. In this analysis, "the issues of irreparable harm and adequacy of remedies at law are inextricably intertwined." *ActiveVideo Networks, Inc. v. Verizon Commc'ns, Inc.*, 694 F.3d 1312, 1337 (Fed. Cir. 2012). Generally, "mere damages will not compensate for a[n infringing] competitor's increasing share of the market" in which the patentee "competes." *Douglas Dynamics*, 717 F.3d at 1345. And Google is not just any infringer; it is one of the most powerful companies in the world. Denying an injunction sends the message that a company can simply pay to avoid infringement. That is particularly troublesome here, where Google sells its infringing products as "loss leader[s]" to capture additional customers to whom it can "deliver ... advertisements" while "collect[ing] th[eir] data." Trial Tr. 1120:10-14. As explained below, Google uses these infringing products to capture a user base for *other* Google products, on which it makes heaps of money. Google's

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infringement, meanwhile, continuously undercuts Sonos's market share and damages Sonos's reputation as an innovator in the home-audio space.

Money cannot adequately compensate Sonos because its damages are unquantifiable. Google's infringement caused Sonos to lose an uncertain number of customers (and repeat purchases) when those customers bought Google's infringing products over Sonos's and joined the Google ecosystem instead of the Sonos ecosystem. The Federal Circuit has recognized this "ecosystem effect"—meaning "the effect the sale of a single product can have on downstream sales of accessories" and other products, which is hard to quantify—as an important consideration for whether the patentee has inadequate legal remedies. Apple, 809 F.3d at 645; see also Metalcraft of Mayville, Inc. v. The Toro Co., 848 F.3d 1358, 1368 (Fed. Cir. 2017) (explaining that the ecosystem effect makes it "difficult to quantify" the potentially "far-reaching, long-term impact on [a patentee's] future revenues" of losing customers to an infringer).

Money damages are similarly unable to compensate Sonos for the harm to its reputation as an innovator that Google has caused. "[D]amage to reputation" constitutes "valid grounds for finding irreparable harm." Celsis In Vitro, Inc. v. CellzDirect, Inc., 664 F.3d 922, 930 (Fed. Cir. 2012). Sonos established the wireless multiroom audio market. One of Sonos's core values is innovation, and it is widely recognized as a leader in the audio player market. Kwasizur Decl. ¶¶ 18. Customers expect Sonos's products to offer the best sound quality and audio features. When Google uses Sonos's patented technology without permission, it diminishes the value of Sonos's products in the eyes of consumers who want the latest and greatest audio experience. Instead of understanding that they need to look to Sonos for the newest product features, consumers will believe that Google's products offer similar "innovations," thus harming Sonos's "reputation as an innovator." Douglas Dynamics, 717 F.3d at 1344-45. They may also believe that *Google* is the innovator. This case demonstrates that precise risk, because Google was able to use its massive resources to introduce the feature to the marketplace before Sonos. This reputational harm is impossible to quantify. Only enjoining Google from using Sonos's proprietary technology can protect Sonos's reputation as an innovator.

### C. The Balance Of Hardships Favors An Injunction.

The previous sections demonstrate that Sonos has suffered serious harm from Google's infringement, and will continue to suffer such harm without an injunction. The Court may also properly consider factors like "the parties' sizes, products, and revenue sources" when assessing the balance of hardships. *i4i Ltd. P'ship v. Microsoft Corp.*, 598 F.3d 831, 862 (Fed. Cir. 2010).

There is no doubt that these factors favor Sonos. Sonos is a much smaller company—according to the companies' public market valuations, it is barely 1/1,000th the size of Google. And audio players are the core of Sonos's business—every employee at Sonos works in support of Sonos's music and audio business, and the sales of Sonos's audio players pay employees' salaries and support the company's research-and-development initiatives. *See* Kwasizer Decl. ¶¶ 3-5; Trial Tr. 1006:6-19 (Ms. Kwasizur's testimony that Sonos's "whole goal in life is to make sure that people get to listen to music" and "have great sound experiences"); https://www.sonos.com/en-us/shop. Google, meanwhile, makes billions of dollars on non-speaker products and sells speakers just to draw consumers into its advertising ecosystem and collect their data. Kwasizer Decl. ¶¶ 15-17. On balance, an injunction will have little effect on Google relative to the ongoing irreparable harm to Sonos's core business.

More fundamentally, "requiring [Sonos] to compete against its own patented invention, with the resultant harms described above, places a substantial hardship on [Sonos]." *Robert Bosch LLC v. Pylon Mfg. Corp.*, 659 F.3d 1142, 1156 (Fed. Cir. 2011). By contrast, Google will not suffer any cognizable hardship. Google sells its infringing products as loss leaders and obviously does not need the revenue from those products to continue operating. Google is one of the most valuable and profitable companies in the world; selling the infringing media players is just a tiny part of what Google does. But even if an injunction would hurt Google's smart speaker business to some degree, someone "who elects to build a business on a product found to infringe cannot be heard to complain if an injunction against continuing infringement destroys the business so elected." *Windsurfing Int'l, Inc. v. AMF, Inc.*, 782 F.2d 995, 1003 n.12 (Fed. Cir. 1986). And Google already attempted one redesign of the infringing products; if it wishes to

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actually remove the infringing feature from its media players, such as by disabling static groups that allow a speaker to be a member of multiple groups, it can.

#### D. The Public Interest Would Not Be Disserved By An Injunction.

"[E]specially when the patentee practices [its] inventions," as Sonos does, "the public interest nearly always weighs in favor of protecting property rights" with an injunction. Apple, 809 F.3d at 647. Moreover, for perspective, "[t]his is not a case where the public would be deprived of ... lifesaving drugs" because of an injunction. *Id.* Additionally, if the injunction forced Google to stop selling some or all of the infringing products—which Google could avoid by removing the infringing feature—consumers could buy Sonos's products instead, some of which include access to Google Assistant, so the public would not suffer from lack of access to the patented technology. See Kwasizur Decl. ¶ 23-24. Consumers could also buy speakers similar to Google's infringing products from Amazon or Apple. And an injunction would benefit the public through "the encouragement of investment-based risk," which "is the fundamental purpose of the patent grant, and is based directly on the right to exclude." Sanofi-Synthelabo v. Apotex, Inc., 470 F.3d 1368, 1383 (Fed. Cir. 2006).

In sum, a permanent injunction against Google is warranted here. Sonos's Proposed Permanent Injunction is attached to this motion.

### III. ABSENT A PERMANENT INJUNCTION, SONOS IS ENTITLED TO ONGOING ROYALTIES FOR GOOGLE'S WILLFUL INFRINGEMENT.

#### Ongoing Royalties Are Necessary To Fully Compensate Sonos For Google's Α. Infringement.

If the Court does not enter a permanent injunction against Google, it should "award[] an ongoing royalty for patent infringement in lieu of an injunction." Paice LLC v. Toyota Motor Corp., 504 F.3d 1293, 1314 (Fed. Cir. 2007) (citing 35 U.S.C. § 283). The jury selected a perunit royalty, Dkt. 774 at 4, and the damages award accounts only for sales through September 2022, so the damages award plainly does not compensate Sonos for post-verdict infringement. But Google's post-verdict infringement continues to harm Sonos (and damages continue to

accrue), so this Court should "fully compensate" Sonos by "account[ing] for post-verdict sales." Fresenius USA, Inc. v. Baxter Int'l, Inc., 582 F.3d 1288, 1303 (Fed. Cir. 2009); see also Telcordia Techs., Inc. v. Cisco Sys., Inc., 612 F.3d 1365, 1379 (Fed Cir. 2010) (finding an ongoing royalty "appropriate" where the record showed that the patentee "ha[d] not been compensated for [the defendant's] continuing infringement"). And even if the Court does enter a permanent injunction against Google, it should award Sonos post-verdict royalties at a minimum of \$2.30 per unit for sales of the infringing products that Google made from the date of the verdict until the entry of the injunction.

Awarding an ongoing royalty would also conserve judicial and party resources by eliminating the need for Sonos to file separate suits later to recover damages for post-verdict infringement. *See Apple, Inc. v. Samsung Elecs. Co.*, No. 12-cv-630, 2014 WL 6687122, at \*9 (N.D. Cal. Nov. 25, 2014) (collecting cases that "awarded ongoing royalties in lieu of an injunction"). The Northern District has explained that "requiring such additional litigation would be inefficient and unhelpful, serving only to delay the patentee's right to recover." *Hynix Semiconductor Inc. v. Rambus Inc.*, 609 F. Supp. 2d 951, 961 (N.D. Cal. 2009).

If the Court decides to award a post-verdict ongoing royalty in lieu of an injunction (or when determining the rate for sales made between the verdict and entry of an injunction), "courts have uniformly held" that the jury's royalty rate provides the "starting point" for determining the ongoing royalty rate. *Erfindergemeinschaft UroPep GbR v. Eli Lilly & Co.*, No. 2:15-cv-1202-WCB, 2017 WL 3034655, at \*6-\*7 (E.D. Tex. July 18, 2017) (collecting cases). Thus, ongoing royalty rates "ordinarily range from the rate found by the jury for pre-verdict infringement to a rate somewhat higher." *Id.* Higher awards reflect the "fundamental difference" in the parties' circumstances after a verdict. *Amado v. Microsoft Corp.*, 517 F.3d 1353, 1361 (Fed. Cir. 2008). Before judgment, both liability and the patent's validity are "uncertain, and damages are determined in the context of that uncertainty." *Id.* at 1362. But after a court enters a judgment of infringement and validity, "the calculus is markedly different"; "different economic factors are involved" and "the parties' bargaining positions" have changed. *Id.* In other words, as the

Federal Circuit has described, a "later jury" in a subsequent suit addressing continued infringement "would necessarily be focused on what a hypothetical negotiation would look like after the prior infringement verdict." XY, LLC v. Trans Ova Genetics, 890 F.3d 1282, 1297 (Fed. Cir. 2018). And, as explained below, "[a]bsent very unusual circumstances," Google's continued infringement of the '885 patent post-verdict is willful. Affinity Labs of Tex. v. BMW N. Am., LLC, 783 F. Supp. 2d 891, 899 (E.D. Tex. 2011).

Here, Sonos's improved post-verdict bargaining position (and, independently, Google's post-verdict willful infringement) warrant an ongoing per-unit royalty of at least \$2.30—the jury's per-unit award—though an award of up to \$3.00 would be fully justified here. A higher award than the jury's rate would reflect Sonos's enhanced bargaining power now that the '885 patent has been found to be valid and infringed, the jury's sound rejection of Google's preferred "redesign," and the need to deter Google's continuing infringement. As is apparent, nothing about the parties' changed circumstances post-trial operates in Google's favor as to the '885 patent, particularly where the jury rejected Google's first-choice design-around. Thus, it would be unreasonable to award an ongoing royalty *lower* than the jury's award. Indeed, a study of ongoing royalty awards from 2007 to 2015 found zero cases where the ongoing award was lower than the jury's royalty rate. J. Gregory Sidak, Ongoing Royalties for Patent Infringement, 24 Tex. Intell. Prop. L.J. 161, 175 (2016). That is because the jury's royalty rate sets the floor for ongoing royalties, see UroPep, 2017 WL 3034655, at \*7, given the change in the parties' circumstances after an infringement verdict, Amado, 517 F.3d at 1361.

A higher award, up to \$3.00 a unit, is fully justified here. A \$3.00 rate is about 33% higher than the jury's rate. \$3.00 per unit would reflect the reality that a hypothetical negotiation taking place in May 2023 would (1) start at the jury's \$2.30 rate and (2) recognize the longstanding and ongoing competition between Sonos and Google, the success of Google's products in driving search and ad revenue, the parties' desire to secure households, Google's ability to undercut Sonos's prices, consumers' desires to have the ability to create multiple, static

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speaker groups, Google's inability to easily design-around the '885 patent, and Google's willful infringement.

In sum, whether the Court awards ongoing royalties in lieu of an injunction or only until the entry of an injunction, it should award Sonos at least \$2.30 per unit and up to \$3.00 per unit.

### B. The Verdict Establishes Willfulness Going Forward.

Google cannot reasonably dispute that, at least post-verdict, it willfully infringes the '885 patent.¹ Google knows of the patent and its continued post-verdict sales of infringing devices constitute "deliberate or intentional infringement." *Ironburg Inventions Ltd. v. Valve Corp.*, 64 F.4th 1274, 1296 (Fed. Cir. 2023) (quoting *SRI Int'l, Inc. v. Cisco Sys., Inc.*, 14 F.4th 1323, 1330 (Fed. Cir. 2021)); *see also Eko Brands, LLC v. Adrian Rivera Maynez Enters., Inc.*, 946 F.3d 1367, 1379 (Fed. Cir. 2020) ("willful infringement can simply be 'deliberate' infringement"). Indeed, district courts apply a "general presumption that post-verdict infringement is willful." *VirnetX Inc. v. Apple Inc.*, 324 F. Supp. 3d 836, 861-83 (E.D. Tex. 2017) (collecting cases).

The jury found that the new versions of Google's products infringe the '885 patent and rejected Google's invalidity arguments. Dkt. 774 at 1 (Verdict Form). Google therefore has "no reasonable basis to believe that it d[oes] not infringe" a valid patent. *SRI*, 14 F.4th at 1328. As other courts have explained, "[f]ollowing a jury verdict and entry of judgment of infringement and no invalidity, a defendant's continued infringement will be willful absent very unusual circumstances." *Affinity Labs*, 783 F. Supp. 2d at 899; *Paice LLC v. Toyota Motor Corp.*, 609 F. Supp. 2d 620, 630 (E.D. Tex. 2009) ("Once judgment is entered, ongoing infringement by the adjudged infringer is willful[.]"); *Fresenius USA, Inc. v. Baxter, Int'l, Inc.*, No. C03-1431 PJH, 2012 WL 761712 (N.D. Cal. Mar. 8, 2012), *vacated and remanded on other grounds by*, 721 F.3d 1330 (Fed. Cir. 2013).

There are no "unusual circumstances" here. Google has known that it infringes the '885 patent since at least July 2022—when the Court entered summary judgment of infringement.

<sup>&</sup>lt;sup>1</sup> Sonos maintains that Google's pre-verdict infringement was also willful—both from the date of the complaint as well as after the Court's summary judgment order. Dkt. 309.

Dkt. 309. For several months following that summary judgment order, Google had no invalidity

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defenses at all. Dkt. 382 (granting summary judgment of validity); Dkt. 539 (granting reconsideration). Even after the Court granted Google's motion for reconsideration on prior artbased invalidity defenses, Google's invalidity arguments rested on the tortured contention that the dynamic "party mode" in Sonos's 2005 system was a static zone scene. Google's noninfringement argument, which amounted to adding one line of source code, was similarly tortured. Google implemented the redesign after its own technical expert took the position that "standalone mode" did not require active playback, despite knowing that Google's redesign argument depended on the opposite contention. See Trial Tr. at 1462:4-6; Dkt. 793-3 at ECF p. 5 ("Q: In order to meet the standalone mode, does the zone player have to be playing audio? THE DEPONENT: That's not my understanding."); Trial Tr. at 1645:13-1646:11 (Dr. Almeroth explaining why Dr. Schonfeld's new interpretation of standalone mode requiring active playback "doesn't make sense" and is not consistent with the invention or the claims).

Even Google's written description arguments are not an "unusual circumstance[]." The Court has received extensive briefing on this issue, and we will not rehash it here. Suffice it to say, despite multiple opportunities, Google has still failed to demonstrate, by clear and convincing evidence, that the 2006 provisional or 2007 non-provisional do not provide written description support for overlapping groups. See, e.g., Dkt. 723 at 24-32 (identifying extensive other support for overlapping groups in the 2007 non-provisional), 43-45 (explaining that Google has abandoned any written description challenge); Dkt. 789 at 3-7 (explaining that Google has failed to establish any meritorious basis for reopening written description issues); cf. Dkt. 729 (Google's brief failing to even acknowledge the clear-and-convincing-evidence standard, much less explain why Google's waived theory meets the standard). Accordingly, the Court should find that Google's post-verdict infringement is willful.

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#### IV. THE FINAL JUDGMENT SHOULD INCLUDE SUPPLEMENTAL DAMAGES AND INTEREST.

### Sonos Is Entitled To Pre-Verdict Supplemental Damages.

The jury's damages award accounts for sales of infringing products from November 24, 2020, to September 30, 2022, because that is the only period for which Google provided sales data for the accused media players. Trial Tr. 1550:10; Dkt. 791-1 at 44 (PDX1.46). In other words, the jury did not consider infringing sales that occurred from October 1, 2022 until the verdict on May 26, 2023, so the verdict does not fully compensate Sonos for Google's pre-verdict infringement. Under 35 U.S.C. § 284, "the court shall award ... a reasonable royalty," and "[w]hen the damages are not found by a jury, the court shall assess them." (Emphases added.).

"Calculating pre-verdict supplemental damages ... merely require[s] applying the jury's royalty rate to [the] ... actual infringing sales base." Bayer Healthcare LLC v. Baxalta Inc., 989 F.3d 964, 986 (Fed. Cir. 2021). Thus, Sonos is entitled to pre-verdict supplemental damages for infringing products that Google sold or imported into the United States from October 1, 2022, to May 26, 2023—the date of the verdict—at the \$2.30 per-unit royalty that the jury awarded. See Godo Kaisha IP Bridge 1 v. TCL Commc'n Tech. Holdings Ltd., 967 F.3d 1380, 1382, 1385 (Fed. Cir. 2020) (affirming pre-verdict supplemental damages awarded at the jury's royalty rate based on "an accounting of infringing sales of all adjudicated products through the date of the verdict"). On June 8, Sonos asked Google for this sales data. Kolker Decl. Ex. 2 (Richter Email). Google promised to "respond to [Sonos's] email in more detail," but has not yet produced the necessary information.

### B. Sonos Is Entitled To Supplemental Damages Based On The Additional **Infringing Devices Google "Made" During Its December 2022 Software** Update.

In December 2022, in an effort to design around the '885 patent, Google pushed out firmware updates to millions of Google speakers, including speakers sold prior to the issuance of the '885 patent. See, e.g., Dkt. 755-2 at ECF p. 56 (MacKay) (all Google speakers except "devices that don't receive updates[] anymore" were updated with infringing firmware). The jury has now found that the combination of Google's redesigned firmware with Google hardware creates an infringing device. Dkt. 774 at 1. Sonos should receive damages for all speakers that received the redesign update. The jury's damages award, however, only accounts for Google products *sold* during the damages period. Indeed, Google implemented its redesign update *after* the close of fact discovery in this case. The damages award should therefore be supplemented to fully compensate Sonos for the additional infringing products *made* by Google in December 2022.

First, given the jury's verdict, there is no dispute that these media players are infringing.

First, given the jury's verdict, there is no dispute that these media players are infringing. The question is who is the infringer—Google or the consumer? Sonos maintains that Google is the infringer, because Google *made* the infringing devices with an update that was mandatory, not optional. But to the extent the Court believes that the consumer is the infringer, then Sonos should be able to recover for those acts of infringement under an indirect infringement theory.<sup>2</sup>

35 U.S.C. § 271(a) provides that infringement occurs whenever a defendant *makes*, uses, sells, offers to sell, or imports into the United States an infringing apparatus. Google's decision to update the software in December 2022 constituted an additional infringing act: it *made* new infringing products out of speakers first sold prior to issuance of the '885 patent.

Here, Google pushed out the infringing update to its media players. Updates "to Google Nest or Home speakers and displays" are done "automatically as part of setup so there's nothing [a user] need to do to get the update." *See* 

https://support.google.com/googlenest/answer/7071791?hl=en; see also

https://support.google.com/googlenest/answer/7072284?hl=en&ref\_topic=7195843&sjid=115714

<sup>2</sup> This Court previously ruled that Sonos cannot establish knowledge sufficient to support indirect infringement because Sonos did not send Google a pre-complaint cease-and-desist letter. *See*, *e.g.*, -7559 Case, Dkt. 156, 210. Sonos reserves the right to challenge that ruling on appeal. Sonos also contends that, at the very least, such knowledge can be established going forward based on the jury's verdict of infringement. To hold that Google does not *now* have notice would, in effect, grant Google a paid-up license to indirectly infringe in perpetuity—based solely on the fact that the parties did not go through the exercise of pre-suit letter writing. Indeed, Google continues to indirectly infringe by servicing the infringing speakers and thereby encouraging end

users to directly infringe by "us[ing]" those products. 35 U.S.C. § 284. This Court should enjoin such indirect infringement or, in the alternative, award Sonos supplemental damages for the additional acts of indirect infringement at an appropriate per-unit royalty rate.

35651350186704-NA ("When available, your speaker or display will automatically update to the latest software version."). By pushing out this update, which then installed itself on media players "automatically," Google made infringing devices.

The Federal Circuit has made clear that installing new software on pre-existing hardware constitutes an infringing act of "making" when, as here, the software adds the limitations needed to render the hardware infringing. *Centrak, Inc. v. Sonitor Techs., Inc.*, 915 F.3d 1360, 1372 (Fed. Cir. 2019) (holding that Defendant's configuration of software may constitute an infringing act). "[A]s long as a defendant adds the final limitations to complete a claimed combination," as Google did when it pushed out its redesign in December 2022, "the defendant infringes." *Id.*; *see also Lifetime Indus., Inc. v. Trim-Lok, Inc.*, 869 F.3d 1372 (Fed. Cir. 2017) (Defendant infringed claims for two-part seal used on recreational vehicle by installing the seal on existing RV).

Moreover, the case law is clear that "making" alone constitutes infringement, and that a patent owner is owed a reasonable royalty for all products "made" during the damages period. Thus, in *Siemens Medical Solutions USA, Inc. v. Saint-Gobain Ceramics & Plastics, Inc.*, the Federal Circuit held that the district court erred when it failed to calculate a reasonable royalty award for units that the evidence showed to have been "made" during the damages period, despite the lack of evidence showing that they were "sold." 637 F.3d 1269, 1291 (Fed. Cir. 2011). Similarly, in *Sensonics, Inc. v. Aerosonic Corp.*, the Court confirmed that damages should be awarded for units made, but not sold, during the damages period. 81 F.3d 1566, 1573 (Fed. Cir. 1996).<sup>3</sup>

<sup>&</sup>lt;sup>3</sup> Notably, the fact that Google sold some of the devices in question prior to issuance of the '885 patent does not insulate Google from liability for infringing acts that occurred post-issuance. *See Sysmex Corp. v. Beckman Coulter, Inc.*,No. CV 19-1642-JFB-CJB, 2022 WL 1786526, at \*11–\*12 (D. Del. May 26, 2022) (explaining that pre-issuance sale of products does not extinguish infringement liability based on post-issuance maintenance of those products); *Columbia N.R.R. Co. v. Chandler*, 241 F. 261 (9th Cir. 1917) (holding that, while the patentee could not recover damages for the manufacture of infringing trucks prior to the issuance of the patent, it did not follow "that the trucks were set free from the monopoly of the patent, and could thereafter be used, without liability to the inventor").

The infringing redesign devices were not accounted for in the jury's damages award. Here, the jury awarded a per-unit royalty of \$2.30 on the roughly 14.1 million Google products sold between November 2020 and September 2022 (the only period for which Google provided data on the number of infringing products). That award does not account for all of the infringing products "made" by way of Google's December 2022 software update and therefore does not adequately compensate Sonos for the full scope of Google's infringement. In fact, no devices with the infringing redesign were included in the jury's damages award, because Google's sales data ended in September 2022 and the design was pushed out to speakers beginning in December 2022. Nonetheless, to avoid any concern about double-counting, the court can perform an easy calculation based on information within Google's possession.

Sonos requested information about how many players received the redesign update (e.g., firmware v. 1.56.324896 and related display updates). Kolker Decl. Ex. 2. Google promised to "respond to [Sonos's] email in more detail," but has not yet produced the necessary information. Once Google comes forward with this information, the court can take the total number of speakers that received the 2022 software update and then subtract the 14.1 million speakers already accounted for in the jury's award. This means that speakers sold from November 24, 2020 to September 20, 2022—even those that received the redesign updates—would be counted in the damages base only once. The court can then take the resulting number and multiply it by the jury's \$2.30 per-unit royalty rate. Such supplemental damages will ensure that Sonos receives "no less than a reasonable royalty" for *all* of Google's infringing acts. 35 U.S.C. § 284.

### C. Sonos Is Entitled To Pre-Judgment Interest.

Pre-judgment interest furthers "Congress's 'overriding purpose of affording patent owners complete compensation' since a patentee's damages also include the 'forgone use of the money between the time of infringement and the date of judgment." Whitserve, LLC v. Comput.

Packages, Inc., 694 F.3d 10, 36 (Fed. Cir. 2012) (quoting Gen. Motors Corp. v. Devex Corp., 461 U.S. 648, 655-56 (1983)). Thus, "[a]s a rule, 'prejudgment interest should be awarded under

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35 U.S.C. § 284 absent some justification for withholding such an award." *Id.* (quoting *Gen*. Motors, 461 U.S. at 657).

The Court should order pre-judgment interest at the prime rate "from the date of infringement to the date of judgment." Nickson Indus., Inc. v. Rol Mfg. Co., 847 F.2d 795, 800 (Fed. Cir. 1988). Because Google held money during the infringement period "that otherwise would have been used to make royalty payments, it is reasonable to treat that money as a compelled loan from [Sonos] to [Google] and to value the loan at the rate that [Google] would have been required to pay on the open market for the use of that money." Erfindergemeinschaft *UroPep GbR v. Eli Lilly & Co.*, No. 2:15-cv-1202-WCB, 2017 WL 2190055, at \*9 (E.D. Tex. May 18, 2017). Courts generally agree "that the prime rate best compensates a patentee for lost revenues during the period of infringement because the prime rate represents the cost of borrowing money, which is a better measure of the harm suffered as a result of the loss of the use of money over time" than other rates. Finjan Software, Ltd. V. Secure Computing Corp., No. 06cv-369, 2009 WL 2524495, at \*12 (D. Del. Aug 18, 2009) (internal quotation marks omitted; collecting cases), aff'd in part, rev'd in part on other grounds by, 626 F.3d 1197 (Fed. Cir. 2010).

Further, the Court should order that the award of pre-judgment interest include quarterly compounding at the prime rate, because "compound rather than simple interest assures that the patent owner is fully compensated." Rite-Hite Corp. v. Kelley Co., Inc., 56 F.3d 1538, 1555 (Fed. Cir. 1995) (internal quotation marks omitted); see also Fresenius Med. Care Holdings, Inc. v. Baxter Int'l, Inc., No. 03-cv-1431, 2008 WL 928535, at \*2 (N.D. Cal. Apr. 4, 2008) ("compounding is needed to account for the time value of money" (internal quotation marks omitted)). Indeed, Sonos introduced various licensing agreements for its patent portfolio (including the '885 patent) that required quarterly payments to Sonos. E.g., TX6632 at 3, 6-7 (Lenbrook); TX6331 at 3, 7 (Pass & Seymour, Inc.); Trial Tr. 1016:19-1017:8. Thus, prejudgment interest should be compounded quarterly here.

Because Google has not yet produced sales data for the infringing products from October 1, 2022, through the date of the verdict, Sonos cannot yet calculate its pre-verdict

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supplemental damages. For the same reason, Sonos cannot yet calculate the pre-judgment interest to which it is entitled, since pre-judgment interest should also be awarded on those supplemental damages. After Google produces updated sales data, Sonos will provide the Court with a declaration from its economic expert quantifying the calculation of pre-judgment interest at the prime rate, compounded quarterly.

#### Sonos Is Entitled To Post-Judgment Interest. D.

The Court should award post-judgment interest in accordance with 28 U.S.C. § 1961. Post-judgment interest "compensate[s] the successful plaintiff for being deprived of compensation for the loss of time between the ascertainment of the damage and the payment by the defendant." United States v. Bell, 602 F.3d 1074, 1083 (9th Cir. 2010) (internal quotation marks omitted). Post-judgment interest under § 1961 applies to the verdict plus any monetary sums that augment the jury verdict, including supplemental damages, pre-judgment interest, and costs. That is so because "once a judgment is obtained, interest thereon is mandatory without regard to the elements of which that judgment is composed." Air Separation, Inc. v. Underwriters at Lloyd's of London, 45 F.3d 288, 290 (9th Cir. 1995) (quoting Perkins v. Standard Oil Co., 487 F.2d 672, 674 (9th Cir. 1973)). Courts thus must apply post-judgment interest to everything from "costs" and "exemplary damages" to "the prejudgment interest component of a district court's monetary judgment." Id.

Here, the precise amount of post-judgment interest to which Sonos is entitled depends on what other damages the Court awards beyond the jury's verdict, and on when Google pays Sonos. Because those factors are unascertainable currently, Sonos asks that the Court order that postjudgment interest be awarded on the final money judgment entered in Sonos's favor; e.g., by ordering that "Google is ordered to pay post-judgment interest on all amounts awarded to Plaintiff Sonos Inc., starting on May 27, 2023, at a rate equal to the weekly average 1-year constant maturity Treasury yield, as published by the Board of Governors of the Federal Reserve System, for the calendar week preceding the date of the judgment. 28 U.S.C. § 1961." Sonos's proposed order on additional damages is attached to this motion.

### V. GOOGLE SHOULD GIVE NOTICE OF ITS INFRINGEMENT TO CONSUMERS.

Sonos proposes that any permanent injunction include two notice requirements. First, as is standard, Google should be ordered to provide notice of its infringement and any permanent injunction to its "parents, subsidiaries, successors, assigns, officers, agents, servants, employees, attorneys, and persons or entities in active concert or participation with them (including any affiliated entities), as well as to any and all manufacturers, distributors, retailers, [and] licensees[.]" Second, Google should be required to provide notice of Google's infringement to owners of media players and post the permanent injunction on its product sales pages and help pages. In this way, relevant consumers will learn of the injunction and Google's infringement. Consumers who own infringing media players can receive an email notice from Google. See, e.g., Power Integrations, Inc. v. Fairchild Semiconductor Int'l, Inc., No. CIV.A. 04-1371-JJF, 2008 WL 5210843, at \*2 (D. Del. Dec. 12, 2008) (requiring notice of the injunction to "all distributors, customers or other third-parties who have ordered, received or purchased any of the parts enumerated ...."); Polara Eng'g, Inc. v. Campbell Co., 237 F. Supp. 3d 956, 991 (C.D. Cal. 2017) ("The Court will, however, order Campbell to send notice to its customers of the injunction issued by the Court. This notice requirement is necessary to protect Polara's rights in the '476 Patent."), aff'd in part, vacated in part, remanded sub nom. Polara Eng'g Inc v. Campbell Co., 894 F.3d 1339 (Fed. Cir. 2018); Braintree Lab'ys, Inc. v. Nephro-Tech, Inc., 81 F. Supp. 2d 1122, 1137 (D. Kan. 2000) (requiring notice to customers and to third-parties), aff'd, 15 F. App'x 799 (Fed. Cir. 2001). And consumers who wish to buy additional media players will see the injunction posted on Google's product websites. This notice to potential and current customers is needed because of the strong evidence of repeat purchasers and to protect Sonos's reputation as an innovator. See, e.g., Eagle View Techs., Inc. v. Xactware Sols., Inc., No. 1:15-CV-07025, 2019 WL 5304067, at \*10 (D.N.J. Oct. 18, 2019), injunction vacated after settlement, 2021 WL 5239091 (D.N.J. Nov. 10, 2021) ("requiring such notice to customers provides a valuable remedy reasonably calculated to correct a portion of the harm caused by Defendants' infringement," namely confusion and reputational harm).

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However, notice should not be limited to "all Google media player consumers that these consumers may be infringing the '885 patent if they have three or more Google media players." Dkt. 796. That is because (1) the jury's verdict is that Google—not consumers—is the infringer, and (2) infringement of the '885 patent does not require three or more Google speakers—and Google has waived any argument that it does.

The jury was instructed that it could find direct infringement of the '885 patent, and that indirect infringement applied to the '966 patent. Thus, the jury found that *Google* made, used, sold, or imported infringing products. *See* Dkt. 758 at 15-16 (instructing jury that it must determine whether "Google directly infringed the '885 ... patent[]"); *id.* at 17 (instructing jury that Sonos only "accuses Google of indirectly infringing the '966 patent" (emphasis added)). So, there is no reason to provide a notice that "consumers may be infringing the '885 patent."

There is also no reason to limit infringement to a system of "three or more Google media players." The '885 patent claims "A first zone player." The Court's Summary Judgment Order accepted that individual speakers infringe. E.g., Dkt. 309 at 9. Nothing in claim 1 of the '885 patent requires additional zone players to meet every limitation of the claim. Instead, the "first zone player" has computer programming that "cause *the first zone player* to perform functions"—not that cause *other* zone players to perform functions. Those functions include receiving indications and playing back music in accordance with those indications.<sup>4</sup>

Regardless, Google never disputed the royalty base offered by Sonos (which includes individual media players, not groups of three or more media players). And Google has never disputed Sonos's infringement theory on the basis that a single media player cannot infringe; Dr. Schonfeld said not a word suggesting that infringement of the '885 patent requires three or more players. Google's Rule 50(a) motion did not include any argument that Google does not infringe because at least three speakers are required. E.g., Dkt. 756 at 8 (arguing that the '966')

<sup>&</sup>lt;sup>4</sup> Sonos has already explained why the same is true of the '966 patent, which requires only a "computing device" with certain programming. Dkt. 720 at 2-3; *see also* Dkt. 733 at 5 (explaining that Google conceded that Claim 1 "requires only a smartphone and associated programming," not "a system of a smartphone and multiple speakers for infringement").

patent requires a computing device "networked with at least three zone players that may be added

2 to overlapping zone scenes"). Nor did Google ever request a jury instruction that three speakers 3 are required to infringe the '885 patent—even after the Court stated that it would give that 4 instruction as to the '966 patent. Instead, the jury was instructed (without objection from Google) 5 that infringement requires only the capability to perform the claimed functions. Dkt. 762 (jury 6 instruction 31); Trial Tr. 1918:24-1919:6 (Court's instruction to the jury). 7 Google cannot now argue that multiple speakers are required for infringement of the '885 8 patent. If that were a noninfringement argument, it is waived because Google did not dispute it at 9 trial and did not include it in its Rule 50(a) motion. Freund v. Nycomed Amersham, 347 F.3d 10 752, 761 (9th Cir. 2003). And if it were a claim construction argument, not only has Google 11 failed to identify which claim limitation(s) would require at least three speakers, but as the 12 Federal Circuit has explained, "[w]hen issues of claim construction have not been properly raised 13 in connection with the jury instructions, it is improper for the district court to adopt a new or more 14 detailed claim construction in connection with the JMOL motion." Hewlett-Packard Co. v. 15 Mustek Sys., Inc., 340 F.3d 1314, 1320-21 (Fed. Cir. 2003). Accordingly, there is no basis for 16 limiting Google's notice requirement to telling consumers that they "may be infringing the '885 17 patent if they have three or more Google media players." Instead, Google should be required to 18 tell consumers that *Google* infringes the '885 patent. 19 20 Dated: June 15, 2023 and 21 LEE SULLIVAN SHEA & SMITH LLP

ORRICK HERRINGTON & SUTCLIFFE LLP

By: /s/ Clement Seth Roberts Clement Seth Roberts

Attorneys for Sonos, Inc.

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